

Contributions to the history of certain species of Conifers. By Dr. Maxwell T. Masters. From Linnean Society's Journal, vol. xxii. pp. 169-212. plates II-X.

This is a collection of notes and plates, and is meant to furnish the basis of a fuller sketch of the family. Coming from such hands, however, it would be strange if it did not contain valuable material. The American species discussed are *Abies amabilis* Forbes, *A. grandis* Lindl. (with vars. *Lowiana* and *pallida*, the latter equaling *A. concolor* Engelm., partly), *A. concolor* Lindl., *A. subalpina* Engelm., and *A. nobilis* Lindl. (with new vars. *glauca* and *magnifica*, the latter equaling *A. magnifica* Murray). There has arisen much confusion concerning some of our species, and anything that can be said to bring us to a clearer understanding of them will be welcomed. It is refreshing to see the variety of characters used, and also the reliance that is being placed in the anatomical structure of the leaf. When gross and minute anatomy join forces in descriptive botany some good work will be the result.

A Manual of Structural Botany. By M. C. Cook, M. A., LL. D. W. H. Allen & Co., London. J. H. Vail & Co., New York. 1884. 16mo. pp. iv, 123.

Twenty-five years ago this little volume was prepared to meet the demand for a cheap manual. For one shilling it gave all the salient facts belonging to structural botany, not professing to round out the periods or popularize the dry details. It was to be considered more as a reminder than as an instructor. Now at this late date a new edition has been issued, said to be thoroughly revised. The growing need for cheap books in all departments of science should be recognized and we turned hopefully to this to represent botany. We are sorry to find that while it may have done very well a quarter of a century ago it is no nearer than that to the present status of botany. The last twenty-five years in botany means a good deal, and to say that a botany is published which takes no account of that interval, is to say that it is about worthless. The book before us deals in the most antiquated ideas and terms. Scores of words are used which have been long ago banished to the limbo of useless nomenclature. Besides this, mistakes are more numerous than they should be. On p. 18 is the description and figure of "raphides," the former of which applies to crystals in general, and the latter represents the compound crystals of *Begonia*. Parenchyma is said to be cellular tissue with cells hexagonal in cross-section. "When a spiral line is coiled up in the interior of cells, it is called *Fibro-cellular* tissue." It furthermore states that this spiral is sometimes broken up into bars and forms elongated dots. "Pleurenchyma" is said to be "glandular woody tissue," all of which seems to refer to the discigerous tissue of conifers. One of the cell contents is the "*primordial utricle* or *protoplasm*." The pith of a stem is said to be composed of "cellular tissue" as opposed to the woody parts, while the "bark" is treated in the style of long ago. The pollen tubes are said to "penetrate the ovules and discharge into them the contents of the pollen grains, and thus a union is effected between the fovilla, or fertilizing principle of the pollen, and the semi-fluid contents of the ovule." But enough of such illustrations. In many parts the definition of the fixed anatomical terms would serve the purpose of a glossary. The real truth is, the book is untimely. If one understands botany, this book is not needed; if he wants to learn it, this is very far from being the book he wants.

NOTES AND NEWS.

LACTUCA SCARIOLA has been found this season by Mr. Rose, in Union county, Indiana.

THE GLUTINOUS RICE of Siam (*Oryza glutinosa*) has starch which gives a red or red-brown coloration with iodine, instead of blue. It does not appear to differ otherwise from ordinary starch.

REV. KARL KALCHBRENNER, a prominent mycologist, died June 5, at Wallendorf, Upper Hungary, 80 years old.

IN THE JULY *American Journal of Science* Dr. Gray gives a memorial sketch of the late Professor Edward Tuckerman.

M. ED. BORNET, the eminent algologist, has been elected member of the French Academy of Sciences as successor to M. Tulasne.

THE FOURTH FASCICLE of Millspaugh's *American Medicinal Plants* has just appeared. For its purpose, it is a very elaborate and complete work.

DR. A. GRAVIS has been appointed professor in the University and director of the Botanic Garden at Liège in place of the late Professor Morren.

IT IS REPORTED that Dr. Bowdeswell, of England, has discovered the germ of hydrophobia to be a micrococcus found in the nerve tissues. His paper upon the subject is looked forward to with interest.

PROFESSOR TRELEASE has discovered *Eurotium Aspergillus-glaucus* upon opium. The announcement, with description and plate, appears as a Contrib. Dep. Pharmacy of the University of Wisconsin for 1886, II, 5-9.

IN THE *West American Scientist* for June, two new cactuses are described, one of them being figured. They are published from the manuscript notes of Dr. Engelmann. One is an *Echinocactus* and the other a *Cereus*, both from Lower California.

IN THE JULY *Journal of Botany* some Japanese desmids are described and figured, while W. B. Grove continues his papers upon new or noteworthy fungi. Mr. C. C. Babington begins a paper upon the British Rubi, a very large and most puzzling group.

IN THE JULY NUMBER of the *Journal of Microscopy* (London) Mr. R. H. Moore describes the structure of *Anagallis arvensis*, with the aid of three plates. In the same number Mr. H. W. S. Worsley-Benison presents a very interesting *resume* of the subject of plant movement.

IN THE *American Naturalist* for July, Dr. Byron D. Halsted describes and figures some curious pollen-tubes of *Lobelia syphilitica*. They were distorted and misshapen in a strange way, but the cause could not be discovered. The tubes were naturally formed, artificial cultures not having been tried.

WE LEARN from *Nature* that the Swedish Academy of Sciences has issued a work entitled "The Correspondence of Carl von Linnaeus," containing a record of all the correspondents of this famous naturalist, Swedish as well as foreign, with their addresses, date of birth and death, etc., as well as the date of each letter to and from.

PROF. S. M. TRACY, of the Missouri State University, has published a catalogue of the vascular plants of that state. It is the first attempt at a complete catalogue, but it contains 1,785 species. The state is said to be divided into four well defined botanical regions, viz: (1) bottom lands; (2) swamp lands; (3) Ozark region; (4) prairie region.

DR. T. MILLMAN, of Kingston, Canada, writes of finding specimens of *Taraxacum officinale* with two scapes blended into one and bearing two complete heads of flowers. He also finds the same thing in *Chrysanthemum leucanthemum*. Last year dandelions were found in Crawfordsville with three scapes blended into one and bearing three heads of flowers.

THE SOCIETY for the Promotion of Agricultural Science, holds its seventh annual meeting in Buffalo, August 16 and 17, the two days preceding the meeting of the A. A. A. S. The meeting promises to be a full one and rich in papers. Several of our best botanists have forwarded the titles of papers to be read. Dr. B. D. Halsted, of Ames, Iowa, is the Secretary.

TO DR. GRAY's note upon the arillus in *Asimina* (BOTANICAL GAZETTE, July, p. 190), should be appended the following, received too late for insertion in its proper place: *Asimina angustifolia*, of which Mr. Curtiss has now sent both *flowering* and *fruiting* specimens collected in July, has the ovate-subglobose seeds of *A. pygmæa* and an equally well-developed arillus.

DR. C. C. PARRY has published in the *Proc. Davenport Acad. Sci.*, Vol. v, p. 26, the description of a new genus of *Eriogoneæ*, from Lower California. It is founded upon Benham's *Pterostegia macroptera* and Greene's *P. fruticosa*. The name, *Harfordia*, commemorates a well-known Californian botanist. The genus is remarkable among *Eriogoneæ* for its dioecious flowers, and differs from *Pterostegia* in its perennial habit.

STRASBURGER has been experimenting upon intergrafting and has reached some remarkable results. Among herbaceous *Solanaceæ*, *Datura*, Tobacco, Henbane, etc., were grafted successfully upon the common potato. In the case of the *Datura* graft the potatoes were impregnated with atropine. It is said that Tschudy long ago grafted tomato upon a potato stock, and "gathered potatoes from the bottom and tomatoes from the tops of the same plant."